Editor's key points

- Canadian provincial governments have made heavy investments in primary care, and yet Canada continues to be criticized for poor access compared with other developed countries. Although "access" is a multidimensional concept, it is often evaluated using relatively focused metrics, notably same-day and next-day appointments.
- This study aimed to understand patients' perceptions of access to primary care in Ontario using a more comprehensive definition of access that considered both the ease with which a person could obtain needed care and the ways in which health care resources are organized to accommodate a range of options for contacting providers and reaching health services.
- For this sample of patients who had a regular primary care provider, the Composite Access Score was quite high, indicating that they had favourable impressions of their access to care. Further, although most respondents did wait more than 1 day for their appointment, they appeared to find the wait time acceptable, suggesting that it is important to consider other dimensions of primary care quality when assessing access or implementing reforms aimed at improving access.

Patients' perceptions of access to primary care

Analysis of the QUALICOPC Patient Experiences Survey

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Abstract

Objective To gain a more comprehensive understanding of patients' perceptions of access to their primary care practice and how these relate to patient characteristics.

Design Cross-sectional study.

Setting Ontario.

Participants Adult primary care patients in Ontario (N = 1698) completing the Quality and Costs of Primary Care (QUALICOPC) Patient Experiences Survey.

Main outcome measures Responses to 11 access-related survey items, analyzed both individually and as a Composite Access Score (CAS).

Results The mean (SD) CAS was 1.78 (0.16) (the highest possible CAS was 2 and the lowest was 1). Most patients (68%) waited more than 1 day for their appointment. By far most (96%) stated that it was easy to obtain their appointment and that they obtained that appointment as soon as they wanted to (87%). There were no statistically significant relationships between CAS and sex, language fluency, income, education, frequency of emergency department use, or chronic disease status. A higher CAS was associated with being older and being born in Canada, better self-reported health, and increased frequency of visits to a doctor.

Conclusion Despite criticisms of access to primary care, this study found that Ontario patients belonging to primary care practices have favourable impressions of their access. There were few statistically significant relationships between patient characteristics and access, and these relationships appeared to be weak.

L'opinion de patients sur l'accès aux soins de première ligne

Une analyse du QUALICOPC Patient Experiences Survey

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Résumé

Objectif Avoir une compréhension plus large de ce que pensent les patients de l'accès aux services des cliniques qui leur fournissent des soins primaires et déterminer en quoi leur opinion dépend des caractéristiques des patients.

Type d'étude Une étude transversale.

Contexte L'Ontario.

Participants Des adultes recevant des soins primaires en Ontario (N = 1698) et qui ont répondu au *Quality and Cost of Primary Care (QUALICOPC) Patient Experiences Survey.*

Principaux paramètres à l'étude Les réponses à 11 items de l'enquête portant sur l'accès, analysées individuellement et en tant que *Composite Access Score (CAS).*

Résultats Le CAS moyen (DS) était de 1,78 (0,16) (la plus haute valeur possible du CAS était 2 et la plus basse, 1). La plupart des répondants (68 %) devaient attendre plus d'une journée pour leur rendez-vous. La très grande majorité des répondants (96 %) affirmaient qu'il était facile d'obtenir un rendez-vous et qu'ils pouvaient l'obtenir aussi rapidement qu'ils le voulaient (87 %). Il n'y avait aucune relation statiquement significative entre la valeur du CAS et le sexe, la facilité de communiquer, le revenu, l'éducation, la fréquence des visites au services des urgences ou le statut de malade chronique du patient. Il existait toutefois une association entre le fait d'être plus âgé et d'être né au Canada, un meilleur état de santé auto-déclaré et une fréquence accrue des visites au médecin.

Conclusion Malgré certaines critiques à l'égard de l'accès aux soins de première ligne, cette étude a trouvé que les clients ontariens de cliniques de soins primaires ont une impression favorable de la facilité d'accès aux services de leur clinique. Il y avait peu de relation entre les caractéristiques des patients et la facilité d'accès aux services, et ces relations semblaient faibles.

Points de repère du rédacteur

- Les gouvernements des provinces canadiennes ont beaucoup investi dans les soins de première ligne et pourtant, le Canada continue d'essuyer des critiques parce que l'accès à ces services y est inférieur à celui d'autres pays développés. Bien s'il s'agisse d'un concept multidimensionnel, on évalue souvent « l'accès » à l'aide de paramètres relativement pointus, par exemple à partir de rendez-vous obtenus le même jour ou le jour suivant.
- Dans cette étude, on voulait déterminer l'opinion des patients sur l'accès aux soins de première ligne en Ontario, et ce, en se servant d'une définition plus large de l'accès qui tienne compte à la fois de la facilité avec laquelle une personne pouvait obtenir des soins et de la façon dont les ressources des soins de santé sont en mesure de prendre divers moyens pour permettre au patient de rencontrer un soignant et d'être traité.
- Pour les patients de cet échantillon qui avaient un soignant de première ligne régulier, le résultat du *Composite Access Score* était relativement élevé, ce qui indique qu'ils avaient une impression très favorable de leur accès aux soins. De plus, bien que la plupart des répondants devaient attendre plus d'une journée pour leur rendez-vous, ils trouvaient apparemment que c'était un délai acceptable, ce qui laisse entendre qu'il est important de considérer d'autres aspects de la qualité des soins de première ligne lorsqu'on évalue l'accès aux soins ou qu'on instaure des réformes pour améliorer cet accès.

Canada has been criticized for poor access to primary care compared with other developed countries. In the 2016 Commonwealth Fund International Health Policy Survey of the General Public, accessing medical care after hours without going to an emergency department (ED) was rated as "somewhat difficult" or "very difficult" by 66% of Canadians.[1] For Ontario specifically, this figure was 60%.[1] Only 43% of Ontarians reported that they could get a same-day or next-day appointment when needed, and Canada overall persistently ranks last in this measure with no improvement since 2004.[1] This is despite the fact that 93% of Canadians and 96% of Ontarians report that they do have a regular doctor.[1,2] These findings from the Commonwealth Fund study are consistent with other Canadian literature demonstrating difficulty obtaining access to primary care and long wait times for family physician appointments.[3-5]

"Access" within a primary care context

Access to primary care is important at both the patient and the health system levels. The negative implications of inadequate access are well documented and include poorer health outcomes,[6] decreased patient satisfaction,[7-10] duplication of services,[11-13] increased costs related to disruptions in continuity of care,[6,14-17] and increased use of costlier services like EDs.[18] Certain vulnerable populations might face increased challenges accessing primary care. Elderly populations, for example, face difficulties accessing timely care,[19] and poorer populations experience difficulties obtaining care, difficulties paying for care, higher rates of preventable hospitalizations, higher rates of ED use, and a lower quality of care.[4,20]

Within Canada, the apparent difficulties with accessing primary care are puzzling given the heavy investments governments have made in primary care since the early 2000s. In Ontario, for example, substantial investments have been made into alternate funding arrangements, team-based care, patient enrolment incentives, and other incentive payments. Many of these reforms have been driven by a desire to improve access to primary care,[21] and although successful in increasing the number of patients attached to a primary care provider,[21] Ontario, much like Canada as a whole, still seems to struggle with access.[2,5,21]

Thus far, criticisms of Canada's and Ontario's access to primary care have been based primarily on the metric of same-day or next-day access when sick.[2,5] However, access is a complex concept with varying definitions and interpretations in the primary care literature,[22] and the metric of same-day or next-day access not only neglects other important aspects of access, but also does not necessarily relate to patients' perceived acceptability of their access. In an effort to more comprehensively define *access,* Haggerty et al[23] conducted a consensus consultation of primary health care experts across Canada and identified 2 definitions of *accessibility* from the patient perspective:

> The ease with which a person can obtain needed care (including advice and support) from the practitioner of choice within a time frame appropriate to the urgency of the problem.[23]

> The way healthcare resources are organized to accommodate a wide range of patients' abilities to contact healthcare providers and reach healthcare services, that is to say telephone services, flexible appointment systems, hours of operation, and walk-in periods.[23]

Berry et al highlighted increasing patient expectations of convenience in the United States,[24] a sentiment also reflected in the Canadian primary care landscape.[25–27]

To address an important gap in the Canadian literature, we sought to understand access to primary care in Ontario using this more comprehensive definition that considers both dimensions of access. While Ontario has its own provincially governed primary care system, it shares many similarities with other jurisdictions across Canada, including the organization of care delivery and guiding principles and priorities for primary care reform. With new reforms on the horizon,[28] and in an effort to inform Canadian policy makers targeting access, there is a pressing need to better understand how patients perceive various aspects of access to their primary care practice, and the patient characteristics associated with these perceptions.

Methods

Study design

We used data from the Quality and Costs of Primary Care (QUALICOPC) Patient Experiences Survey (PES) to conduct a cross-sectional analysis of Ontario patients attending primary care practices—almost exclusively their own regular practices.[29] The QUALICOPC study is an international study of primary care systems seeking to understand how patients perceive the quality of primary care, how providers deliver services, and overall health outcomes in primary care.[30] In Canada, all 10 provinces participated in the study, and in Ontario the study was conducted in 2013 and 2014.[29]

Detailed methods including validation are summarized elsewhere.[29,31,32] In brief, all physicians who were members of the Ontario College of Family Physicians were mailed or e-mailed invitations from the College to participate in the QUALICOPC study.[32] Interested physicians registered with the provincial research team online or by fax. Only physicians in comprehensive (not focused) family practice were eligible, and only 1 physician from each primary care practice was eligible to participate in order to yield as broad a sample of practices as possible. Nurse practitioners and nurse practitioner–led practices were not included. Physicians were compensated $200 for their participation. One physician from each participating practice was couriered a

survey package of 4 different surveys, 2 of which were to be distributed to patients. Surveys were available in English and French. For the PES, practice staff were asked to distribute surveys to 9 consecutive consenting adult patients (18 years of age or older) visiting the participating physician over a period of 1 to 2 days. All completed patient surveys were collected, including any extra patient surveys beyond the target of 9 per practice.

The response rate for physicians was approximately 3%,[32] although the number of practices (sampling unit) is substantially smaller than the number of physicians and is specifically unknown. Completion rate was high (81%).[32] The final study sample size was 185 practices or approximately 84% of the intended sample size of 220 practices. This study included all 185 practices participating in QUALICOPC Ontario and all 1698 surveys collected from adults completing the PES for each practice (2 to 13 respondents per practice).

Outcome: Composite Access Score

The QUALICOPC investigators used 2 main instruments to develop access-related questions in the PES: the Primary Care Assessment Tool first-contact access subscale[33] and the Primary Care Assessment Survey.[31,34,35] To ensure consistency with the tools used to create and validate the PES, extraction of access-related variables for our study was guided by conceptually mapping items in the PES to the access items in these 2 scales. This process identified 11 access-related items (**Table 1**).

Responses to each variable were coded as "favourable" or "unfavourable" and assigned scores of 2 or 1, respectively. Consensus between the 2 lead authors (K.P., B.L.R.) was used to recode "don't know" responses as either missing or unfavourable depending on the authors' determination of the relevance of patient knowledge to access (**Table 1**), and disputes were resolved by discussion focusing on 2 criteria:

- Is a response of "don't know" about information that should be known by patients?
- If the information is not known, can this lack of knowledge affect access?

For example, "don't know" responses to the statement, "I know how to get evening, night, and weekend services" were recoded as unfavourable, because knowledge about after-hours services was considered an important indicator of access.

Each of the 11 access-related items was analyzed individually and then as a single composite score, herein referred to as the *Composite Access Score* or *CAS*. A mean CAS was determined for each patient who responded to a minimum of 7 of the 11 questions or statements. Using this approach, the highest possible CAS was 2, and the lowest was 1.

Independent variables

To examine whether certain populations experience poorer access to primary care, we studied the following patient characteristics, chosen based on previous literature[4,19]: age, sex, country of birth, language fluency, self-reported general health, self-reported household income, highest level of education, self-reported chronic disease status, self-reported number of visits to a doctor in the past 6 months, and self-reported number of ED visits in the past 12 months.

Ethics

This study was exempted from Research Ethics Board approval by the Western University Health Sciences Research Ethics Board.

Statistical analysis

We used SPSS, version 22, for the descriptive analysis and Stata 13 for the multivariable analysis. For the dependent variable, a mean CAS was calculated. The frequency of each variable contributing to the CAS was determined. The mean age of patients was calculated and frequencies were run for all categorical variables. To account for clustering of patients within practices, relationships between the CAS and the independent variables were studied using a multi-level mixed-effects linear regression. All 11 independent variables were included in the regression analysis. Only patients with data on both the outcome and all independent variables were included in the analysis.

Results

Descriptive analysis

Women comprised most of the sample (63.1%). The mean (SD) age was 51.6 (16.7) years, with the youngest respondent being 18 and the oldest aged 94. **Table 2** presents additional characteristics. Most respondents were fluent in an official Canadian language, were well educated, were of average or above-average income, and had a chronic disease. Few were frequent ED users. Most had visited a physician more than once in the past 6 months. Sample sizes for each characteristic varied slightly owing to differential responsiveness to questions (missing values). The visit that day was rated as "urgent" by 8.5% of patients.

Comparing demographic characteristics from our sample to the those of adult Ontarians as reported by Statistics Canada, we found our sample was older (mean age 51.6 years compared with 48 years) and more predominantly female (63.1% compared with 52%). Education level was similar to that of the general Ontario population, and income level was lower.[36,37]

The CAS

Using the criterion of a minimum of 7 out of 11 completed access items, a CAS was calculated for 1644 participants. The mean (SD) CAS was 1.78 (0.16). The lowest score was 1.1 and the highest 2.0. **Figure 1**

provides details of responses to each item contributing to the CAS. The sample size varies because some questions were not answered by all respondents.

Multi-level mixed-effects linear regression analysis: patient characteristics associated with access

After excluding participants for whom any independent variables were missing, and for whom a CAS could not be calculated, 1469 patients were included in the regression analysis. To account for clustering of patients within practices, a multi-level mixed-effects linear regression analysis was conducted to assess the effect of each independent variable on CAS after controlling for the influence of the other independent variables. Preliminary analyses ensured no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. There were no statistically significant relationships between CAS and sex, language fluency, income, education, frequency of ED use, or chronic disease status. Higher CAS was associated with being older, being born in Canada, better self-reported health, and increased frequency of visits to a doctor. For example, for every 1-year increase in age, the CAS increased by 0.001. **Table 3** summarizes the results.

Discussion

The QUALICOPC study represents a large sample examining patients' experiences with accessing primary care. Using 11 individual items and a composite score measuring access based on the Ontario QUALICOPC PES, we found that adult patients belonging to practices had favourable impressions about their access to primary care. Our results are similar to national-level analyses from the QUALICOPC study, which found Canadian patients' experiences with access to primary care to be favourable across various dimensions.[38]

The second key finding of this study relates to a common criticism of access to primary care in Canada: the wait

Table 1. Items contributing to the Composite Access Score

QUALICOPC PES STATEMENT OR QUESTION	QUALICOPC PES RESPONSE OPTIONS	RECODING FOR ANALYSIS*
The opening hours are too restricted	Yes, no, don't know	• Yes = 1 • No = 2 • Don't know = missing
When I called this practice, I had to wait too long to speak to someone	Yes, no, don't know	• Yes = 1 • No = 2 • Don't know = missing
I know how to get evening, night, and weekend services	Yes, no, don't know	• Yes = 2 • No = 1 • Don't know = 1
If I need a home visit I can get one	Yes, no, don't know	• Yes = 2 • No = 1 • Don't know = missing
For patients who had made an appointment for today's visit: Was it easy to get the appointment?	Yes, no	• Yes = 2 • No = 1
How many days did you wait for this visit from the time that you tried to make an appointment?	Made the appointment earlier today, made the appointment yesterday, waited 2-7 d, waited more than 1 wk, don't know	• Earlier today or yesterday = 2 • 2-7 d or more than 1 wk = 1 • Don't know = missing
Were you able to arrange an appointment with the doctor as soon as you wanted to?	Yes, no	• Yes = 2 • No = 1
The practice is too far away from where I am living or working	Yes, no, don't know	• Yes = 1 • No = 2 • Don't know = missing
I can usually see my regular doctor every time I visit	Yes, no, don't know	• Yes = 2 • No = 1 • Don't know = missing
I can see other doctors in this practice if my doctor is not available	Yes, no, don't know	• Yes = 2 • No = 1 • Don't know = 1
I can see other health care professionals in this practice (eg, nurse practitioner, nurse, dietitian, or pharmacist) without having to see a doctor	Yes, no, don't know	• Yes = 2 • No = 1 • Don't know = 1

QUALICOPC PES—Quality and Costs of Primary Care Patient Experiences Survey.
*A code of 1 is unfavourable and 2 is favourable.

Table 2. Characteristics of respondents: *The denominators vary because not all questions were answered by all respondents.*

CHARACTERISTIC	RESPONDENTS, %
Birth country (n = 1650)	
• Born in Canada	75.0
• Born outside of Canada	25.0
English- or French-language fluency (n = 1642)	
• Fluent or native speaker	75.1
• Sufficient	15.7
• Moderate	4.1
• Poor	2.4
• Not at all	2.7
Self-reported general health (n = 1678)	
• Very good	23.8
• Good	50.2
• Fair	21.3
• Poor	4.7
Household income compared with the rest of Canada (n = 1629)	
• Average	57.0
• Above average	23.2
• Below average	19.8
Highest level of education (n = 1641)	
• Postsecondary education	63.7
• Upper-secondary education (grades 10-12)	29.9
• No qualifications, preprimary, primary, or lower-secondary education	6.4
Presence of a chronic disease (n = 1685)	
• Yes	53.6
• No	46.4
No. of visits to a doctor in the past 6 mo, including current visit (n = 1649)	
• 1	13.3
• 2	25.5
• 3-5	41.9
• ≥ 6	19.2
No. of visits to an ED within the past 12 mo (n = 1676)	
• None	63.8
• 1	20.9
• 2-3	12.5
• ≥ 4	2.8

ED—emergency department.

time to get an appointment. Previous research has found that only 43%[1] to 44%[39] of Ontario patients report same-day or next-day access when they are sick. Strikingly, however, although most of our sample did wait more than 1 day for their appointment, most stated that it was easy to obtain their appointment and that they obtained that appointment as soon as they wanted it. This is again similar to Canada-wide data from the QUALICOPC PES, where although most Canadian patients waited more than a day for their appointment (74%), 83% of patients were seen by the doctor as quickly as they wanted, and 94% reported that it was easy to schedule their appointment.[29] Previous research indicates most primary care visits are of low urgency,[40,41] and in the current sample, only 8.5% stated that the reason for the visit that day was "urgent—needed to be seen today." Patients' perceptions of the acceptability of their wait time is arguably more important than the elapsed time to an appointment, and excessive focus on same-day or next-day access can result in unintended negative effects on other aspects of high-quality primary care. In the United Kingdom, for example, incentives aimed at improving same-day or next-day access not only did not result in an improvement in patient-reported access, but also led to decreased continuity of care.[42] Data from the QUALICOPC Patient Values Survey demonstrates that Canadian patients value continuity, communication, and coordination above access.[29] Clinicians and policy makers should consider the implications of other dimensions of primary care quality when enacting reforms aimed at access.

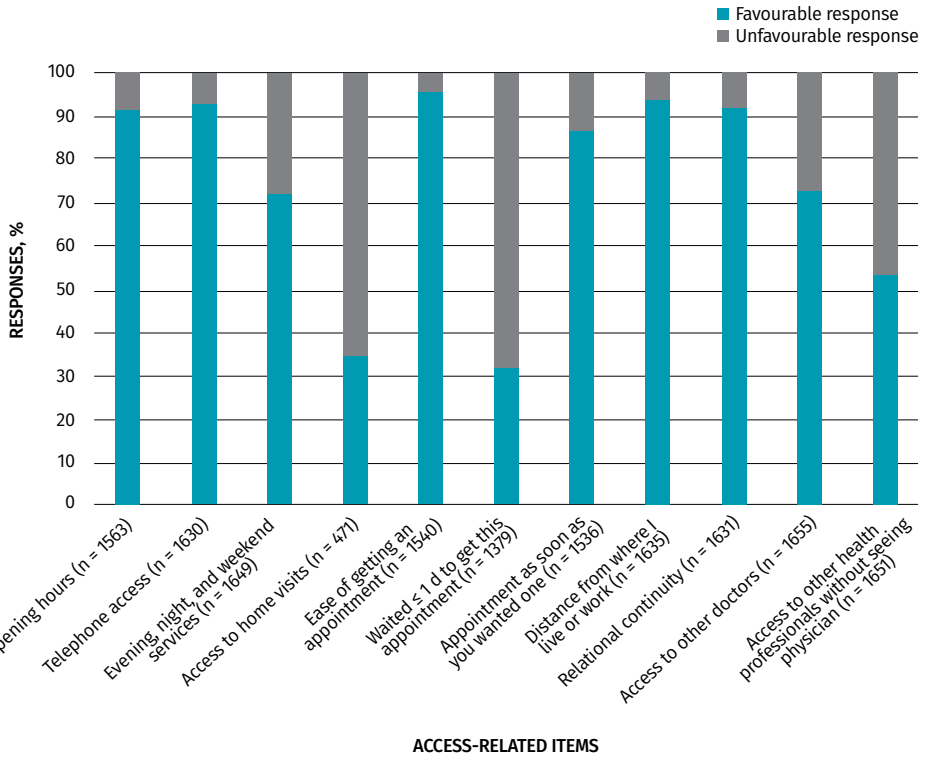
Our sample was older and more predominantly female than the general Ontario population,[43] which is not surprising given that patients were sampled in a health care setting.[44-46] There were a few statistically significant relationships between the CAS and patient characteristics. Although these variables had only a weak effect on the variation in the CAS, it is noteworthy that certain vulnerable populations, including immigrants and those with poorer health, reported poorer access. Also important to note is that other vulnerable populations, such as those of low socioeconomic status, might be underrepresented in our sample, and their perceptions of access might be different than those represented in this survey. Clinicians and policy makers should be mindful of the unique challenges these populations might face. Further research is needed to specifically understand primary care access from the perspective of these more vulnerable populations, and such research might require recruiting patients from outside traditional primary care settings.

Perceived access to other health professionals might relate to organizational factors such as funding for allied health providers and the size of the group (smaller and solo practices might not employ registered nurses or registered practical nurses, for example). Where a collaborative care model exists, some organizations might require physician referral to access allied resources, while others

might allow patients to access these services directly. To test this hypothesis, future analyses of QUALICOPC data might link data from the PES to the Practice Survey.

Few patients reported knowing how to obtain home visits, but there were many missing and "don't know" responses. This could be in part because home visits

Figure 1. Responses to access-related items on the QUALICOPC Patient Experiences Survey: *The denominators vary because not all questions were answered by all respondents.*



QUALICOPC—Quality and Costs of Primary Care.

Table 3. Effect of patient characteristics on the Composite Access Score: ***Results of a multi-level mixed-effects linear regression (n = 1469).***

VARIABLE	β	*Z*	*P* VALUE	95% CI
Older age	.001	2.88	.004	0.000 to 0.001
Birth country outside of Canada	-.008	-2.42	.015	-0.014 to -0.001
Poorer self-reported general health	-.020	-3.29	.001	-0.032 to -0.008
Frequent visits to a doctor	.012	2.63	.009	0.003 to 0.021
Absence of a chronic disease	-.008	-0.08	.422	-0.026 to 0.011
Frequent ED visits	-.006	-1.19	.234	-0.017 to 0.004
Female sex	-.014	-1.59	.112	-0.031 to 0.003
Poorer fluency in English or French	.001	0.28	.777	-0.008 to 0.011
Lower income	-.008	-1.15	.251	-0.021 to 0.006
Lower education	-.005	-0.67	.503	-0.020 to 0.010

ED—emergency department.

are only necessary for, and therefore only offered to, a small cohort of patients. However, it could also relate to the declining number of family physicians providing this service.[47,48] Despite the high number of missing values, we retained this item in our CAS, as we believed it was an important aspect of access to comprehensive primary care.

Limitations

Certain limitations reduce this study's generalizability. Practice response rates were low, and those practices that chose to participate, along with their patients, might have differed from those not represented in the sample. Low family physician response rate is a common challenge encountered by even-better-resourced studies such as the Commonwealth Fund study.[49] That said, QUALICOPC represents, to our knowledge, the largest data set on the quality and organization of primary care in Canada.

By far most respondents were patients who had a primary care provider and spoke English or French, and would therefore have different access challenges than those without a primary care provider or who were not fluent in an official language.[29] The sample is biased in favour of frequent attenders, who might differ in their ability to access care relative to nonattenders. Finally, because the surveys were distributed to patients attending a physicians' office for a visit, results will differ from population-based studies examining access, such as the Commonwealth Fund study, in that the respondents are patients who have been able to access care.

While the CAS is tied to the access items previously validated for the purposes of the QUALICOPC study, and in turn mapped to other well-validated instruments (Primary Care Assessment Tool and Primary Care Assessment Survey), this particular score has not been previously validated, and composite measures in general are associated with inherent challenges.[50]

Conclusion

This study presents a detailed assessment of primary care patients' perceived access to their care in Ontario, and examines access in the context of a novel score combining several important dimensions of this concept. Although not representative of certain marginalized populations who might not have any access, most participants had favourable impressions of their access to primary care, a finding that is distinctly at odds with results based on the prominently used metric of same-day or next-day access. Future research is warranted to better understand what access means to patients and to appropriately design reforms and quality assurance targets. Policy makers should consider multiple dimensions and multiple data sources when targeting access, and bear in mind the differences between patients with and without a primary care attachment.

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Contributors

All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests

None declared

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